IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION OF

WILSON

Group Art Unit: 1771

Appln. No.: 09/868,857

Examiner: VO

Filed: June 21, 2001

#5
KO
12-18-02

Title: STRUCTURAL FOAM COMPOSITE HAVING NANO-PARTICLE REINFORCEMENT AND METHOD OF MAKING THE SAME

December 11, 2002

* * * * *

RESPONSE

Hon. Commissioner of Patents
Washington, D.C. 20231

Sir:

Responsive to the Office Action mailed September 11, 2002, Applicant requests reconsideration and withdrawal of the Restriction Requirement; reconsideration and withdrawal of the rejection of claim 1; and allowance of both claims in the Application.

Restriction Requirement

The Examiner has imposed a Restriction Requirement. Even though method claim 2 (directed to a method of producing structural foam articles) recites each and every element of apparatus claim 1 (directed to a structural foam article) in the context of producing a structural foam article as per claim 1, the Examiner asserts the inventions do not relate to a single inventive concept. The Examiner asserts that the claims do not have the same or corresponding "technical features" under PCT Rule 13.2 because claim 1 is obvious over Karande et al., U.S. Patent No. 5,717,000. According to the Examiner, "[because] the recited structure does not make a contribution over the prior art, unity of invention is lacking and restriction is appropriate." Applicant renews its traversal of the Restriction Requirement.

Applicant respectfully submits that the Examiner has improperly "imported" patentability conclusions into the unity-of-invention analysis. PCT Rule 13.2 explains that the unity of invention requirement will be met "when there is a technical relationship among [the various claimed] inventions involving one or more of the same or corresponding special technical features." PCT Rule 13.2 further explains that "[t]he expression 'special technical

features' shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art." Presumably, the Examiner has interpreted that to mean that unity of invention turns on the validity *vel non* of the claims. Applicant respectfully submits that that is incorrect. The clear import of PCT Rule 13.2 is that there will be unity of invention where the claims share the same features by means of which what is deemed to constitute the invention is defined.

In this case, that is clearly so. As noted above, method claim 2 recites each and every element recited in apparatus claim 1 in the context of producing an apparatus as recited in claim 1. The only difference between the two claims (other than the fact that claim 1 is directed to an apparatus and claim 2 is directed to a process for making that apparatus) is that claim 2 further specifies that a polymer melt, which includes identically the elements recited in apparatus claim 1, is subjected to a molding process consisting of injection molding or extrusion molding. It is clear, however, that Applicant's invention does not reside in the specific molding step, *per se*, but rather, in the constituent components of the structural foam article (and hence the "ingredients" in the method for making the foam article), which components are recited in both claims. In short, the two claims are inextricably linked.

Applicant respectfully submits that the Examiner's apparent focus on the portion of PCT Rule 13.2 that refers to defining a contribution over the prior art, followed by the conclusion that the claims lack unity of invention because (in the Examiner's view) the claims do not patentably distinguish over the prior art, is misguided and does not properly assess unity of invention. Therefore, Applicant renews its traversal of the restriction requirement and respectfully requests that it be withdrawn.[1] (Applicant affirms the election of apparatus claim 1.)

[1] Applicant submits that the impropriety of the restriction requirement would be manifest under the U.S. standard for imposing restriction – whether requiring the Examiner to search all claimed inventions imposes an undue burden on the Examiner. In this case, any search the Examiner conducts for one claim will, of necessity, require that the Examiner search for the elements recited in the other claim. Accordingly, there would be no additional burden at all imposed on the Examiner in requiring her to consider both claims in this Application.

Claim Rejections

The Examiner has rejected claim 1, the apparatus claim, under 35 U.S.C. §103 based on the combination of Karande et al., U.S. Patent No. 5,717,000, and Okada et al., U.S. Patent No. 4,739,007. The Examiner relies on Karande for its disclosure of a polymer foam with organophilic multi-layered particles and on Okada for its disclosure of a thermoplastic polymer with layers of a silicate dispersed through the polymer matrix. The Examiner admits that "Okada [sic; Karande] is silent as to the thickness of the reinforcing particles" and that the combination of references does not disclose or teach the specific size distribution of the particles (more than about 50% are less than about 20 layers thick, and more than about 99% are less than about 30 layers thick), but passes that size distribution off as simply a result-effective variable that would have been recognized by one skilled in the art. Applicant respectfully traverses the rejection.

Notably, the Examiner has adopted the rationale set forth in the application for the specifically claimed limits in support of her assertion as to the obviousness of the claimed invention. Thus, the Examiner's rejection is clearly based on improper hindsight. Moreover, the Examiner has demonstrated no motivation whatsoever as to why one having skill in the art would have made the asserted combination of references or why (beside the Application-disclosed motivation) one having skill in the art would have varied the particle thickness distribution to obtain the claimed invention. As such, Applicant respectfully submits that the rejection is improper and therefore respectfully requests that it be withdrawn.

Similarly, the Examiner has rejected the claim as obvious based on Karande et al. in view of Christiani et al., U.S. Patent No. 5,747,560. The rejection is essentially the same as the rejection based on Karande et al. and Okada et al., with Christiani et al. being "substituted" for Okada et al. as the secondary reference. The Examiner makes the same admission that "Karande is silent as to the thickness of the reinforcing particles" and that the combination does not disclose or teach the claim-recited distribution of reinforcing particle thicknesses and, again, passes that off as a simply a result-effective variable. Applicant respectfully traverses the rejection and requests that it be withdrawn for the same reasons as above in connection with the rejection based on Karande in view of Okada.

In view of the foregoing, Applicant respectfully submits that the restriction requirement should be withdrawn and that both claims are in condition for allowance, and timely Notice to that effect is therefore respectfully requested.

Respectfully submitted,

Pillsbury Winthrop LLP

By: _____

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE — PATENT APPLICATION

Inventor(s): WILSON
Appln. No.: 09 (Series Code) | 868,857 (Serial No.)
Filed: June 21, 2001

Group Art Unit: 1771
Examiner: VO
Atty. Dkt. P 281189 (M#) | 380REG/7015437US (Client Ref)

Appln. Title: STRUCTURAL FOAM COMPOSITE HAVING NANO-PARTICLE REINFORCEMENT AND METHOD OF MAKING THE SAME

OIPE JC174 DEC 11 2002 PATENT & TRADEMARK OFFICE

RECEIVED DEC 12 2002 TECHNOLOGY CENTER R3700 MAIL ROOM

Hon. Commissioner of Patents
Washington, D.C. 20231

Sir:

RESPONSE

Date: December 11, 2002

This is a reply/amendment/letter in the above-identified application and includes the herewith attachment of same date and subject which is incorporated hereinto by reference and the signature below is treated as the signature to the attachment in absence of a signature thereto.

FEE REQUIREMENTS FOR CLAIMS AS AMENDED

1. Small Entity claim
A. ☒ NOT made
B. ☐ Withdrawn
C. ☐ made herewith
D. ☐ made previously
For B & C See **Required Separate** Paper (Pat-256)

	Claims remaining after amendment	Highest number previously paid for		Present Extra	Large/Small Entity	Additional Fee	Fee Code Lg/Sm
2. Total Effective Claims	2	**minus	20	0	x $18/$9 =	+ $0	103/203
3. Independent Claims	2	***minus	3	0	x $84/$42 =	+ $0	102/202
4. If amendment enters proper multiple dependent claim(s) into this application for first time (leave blank if this is a reissue application) ..... add					+ $280/$140 =	+ $0	104/204
5. Original due Date: December 11, 2002		☐ NONE					
6. **Petition is hereby made** to extend the original due date to cover the date this response is filed for which the requisite fee is attached			(1 mo) (2 mos) (3 mos) (4 mos) (5 mos)	$110/$55 = $400/$200 = $920/$460 = $1,440/$720= $1,960/$980=	+ $0		115/215 116/216 117/217 118/218 128/228
7. Enter any previous extension fee paid since above original due date and subtract					- $0		
8.					**Extension Fee**	+ $0	
9. If **Terminal Disclaimer** attached, add Rule 20(d) official fee					+ $110/$55	+ $0	148/248
10. If IDS attached requires Official Fee under Rule 97 (c), ... add or if Rule 97(d) Request ..... add					+ $180 + $180	+ $0	126 126
11. After-Final Request Fee per rules 129(a) and 17(r)					+ $740/370	+ $0	146/246
12. No. of additional inventions for examination per Rule 129(b).....					x $740/370 ea	+ $0	149/249
13. Request for Continued Examination (RCE)					+ $740/370	+ $0	1179/1279
14. Petition fee for						+ $0	
15.					**TOTAL FEE =**	**$0**	

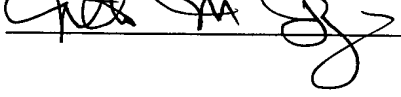
16. *If the entry in this space is less than entry in next space, the "Present Extra" result is "0".
17. **If the "Highest number previously paid for" in this space is less than 20, write "20" in this space.
18. ***If the "Highest number previously paid for" in this space is less than 3, write "3" in this space.

PLEASE CHARGE OUR DEP. ACCT

Our Deposit Account No. 03-3975)
(Our Order No. 81548 (C#) | 281189 (M#)

CHARGE STATEMENT: The Commissioner is hereby authorized to charge any fee specifically authorized hereafter, or any missing or insufficient fee(s) filed, or asserted to be filed, or which should have been filed herewith or concerning any paper filed hereafter, and which may be required under Rules 16-18 (missing or insufficiencies only) now or hereafter relative to this application and the resulting Official Document under Rule 20, or credit any overpayment, to our Accounting/Order Nos. shown above, for which purpose a duplicate copy of this sheet is attached.
This CHARGE STATEMENT does not authorize charge of the issue fee until/unless an issue fee transmittal sheet is filed.

Query: Is appeal deadline now? If so, file Notice of Appeals separately.

Pillsbury Winthrop LLP
Intellectual Property Group
By Atty: Kenneth M. Fagin — Reg. No. 37,615
Sig: 
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NOTE: File this cover sheet in duplicate with PTO receipt (PAT-103A) and attachments

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